

MEMORANDUM

DATE: November 8, 1968

TO: Solid Waste File *LRW*

SUBJECT: New Castle County's proposed sanitary landfill between Red Lion and Tybouts Corner, Delaware, on Del. Route #71.

On October 31, 1968, Robert Westerman met with Mr. Wilmer Aist of the New Castle County, Delaware, Soil Conservation Service. (Box 418, Newark, Delaware) The objective of the meeting was to obtain information on the soil types and groundwater conditions at the site of the proposed New Castle County Landfill which is located between Red Lion and Tybouts Corner - on Delaware Route #71.

The Landfill area was located on soil survey series map #26 - job 6612, which is attached to this memorandum. The area was identified, also, on "Water-table, surface-drainage, and Engineering Soils Maps", prepared by the 1963 Delaware Geological Survey.

The direction of groundwater flow was identified by Mr. Aist as being approximately south-southwest. The water table slopes downward in this direction to the level of the Red Lion Creek. The difference between water table levels at the area approved (S.B.H.) for landfill and the Red Lion Creek as identified as being sixteen (16) feet.

For the area which was granted "interim" approval for landfill, the highest recorded groundwater level was identified as being 36 feet above sea level. The terrain elevation shown for this area is 50 feet. The soil in the area was identified as being Matapeake Silt Loam. This soil is 35% sand and 65% silt and clay and has low shrink and crack potential (less than 10%). The following breakdown of soil conditions under Matapeake Silt Loam was given by Mr. Aist: (Reference attached sheet on soil classification)

<u>Depth</u>	<u>Silt, Clay</u> <u>Per-cent.</u>	<u>Unified Soil</u> <u>Classification</u>
0-11"	65-95	ML
11" - 50"	65-95	ML/CL
50" - 72"	65-95	ML
Below 72"	10-25	SN/SP 027695

The sand and gravel layer below six feet in depth was reported by Mr. Aist to be twenty-one (21) feet thick and black clay was reported to lie at thirty-eight (38) feet in depth. The black clay "holds up"

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the groundwater to the sixteen feet level above the Red Lion Creek level.

The July 1968, booklet "Soil Survey Interpretations for Delaware", (U. S. Dept. of Agriculture, Soil Conservation Service, Newark, Delaware) evaluates MeC2 soil, as exists in the proposed landfill area, as suitable for sanitary landfill. (Page 18: slight limitation but little effect on use as sanitary landfill). The Soil Survey Interpretation Booklet specifically excludes any "distinct" hazard of pollution (to nearby wells, springs, streams, and other bodies and sources of water) from sanitary landfill." (By inference from footnote #4 on page 23.) No flood hazard or problem with periodic high water table was indicated for Mattapeake soil. (See attachment "Flood Plain . . .etc.")

Of the remaining soil types in the area which will later be utilized for landfill MeB2, SaC3, SaC2, and SaB2, all are evaluated as suitable for sanitary landfill, by "Soil Survey Interpretations". EmA, Ws and KeA are unsuitable for sanitary landfill.

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